

Printed Pages- 4

Roll No. ....

**B033415(033)**

**B. Tech. (Fourth Semester) Examination,  
Nov.-Dec. 2021**

**AICTE (New Course)**

**(Information Technology Branch)**

**INTERNET of THINGS**

***Time Allowed : Three hours***

***Maximum Marks : 100***

***Minimum Pass Marks : 35***

***Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any two parts from part (b), (c) and (d) of each question.***

**Unit-I**

1. (a) Define IOT? Write any two IOT applications using Bigdata.

4

[ 2 ]

- (b) Write and explain the important characteristics of IOT. 8
- (c) Describe the Physical Design of IOT. 8
- (d) With the help of a diagram describe : 8
- (i) The Request Response Communication Model.
  - (ii) The Publish subscribe communication model used in IOT.

### Unit-II

2. (a) What is M2M? How it is similar to IOT. 4
- (b) Describe M2M technology and gateways used in it. 8
- (c) Differentiate between IOT and M2M. 8
- (d) Write short notes upon SDN. 8

### Unit-III

3. (a) What is NFV? 4
- (b) Discuss the issues involved in accessing the wireless media in IOT. 8

[ 3 ]

- (c) What is short range MAC layer protocol? Describe any two short range MAC layer protocols in detail. 8
- (d) Write short notes on Data aggregation and Dissemination. 8

### Unit-IV

4. (a) Write and explain design challenges in IOT. 4
- (b) Discuss the various development challenges involved in IOT. 8
- (c) Describe the role of IOT in Surveillance applications. 8
- (d) What is home automation? How does home automation work? What features are available through home automation systems. 8

### Unit-V

5. (a) Write down the similarity and differences between Python tuples and List. 4
- (b) What is an IOT device? Explain the basics building blocks of IOT device with diagram. Write a python program for controlling an LED with a switch. 8

[ 4 ]

- (c) What is raspberry pi? What hardware do you need to setup your rpi? Also write the various models of raspberry pi. 8
- (d) What is Bluetooth and ZigBee? Explain it with advantages and disadvantages. 8